I CLAIM:

1. An electrochemical cell comprising opposed positive and negative electrodes, an aqueous electrolyte in ionic contact with the electrodes and a current reducing additive in ionic contact with the electrolyte and the electrodes, the current reducing additive being capable of reducing the flow of current between the electrodes when a potential ordinarily sufficient to cause electrolysis of the electrolyte is applied across the electrodes, thereby to reduce the amount of electrolysis of the electrolyte.

2. An electrochemical cell according to claim 1, wherein the current reducing additive is selected from the group comprising quaternary ammonium compounds including n-alkyl dimethyl benzyl ammonium chloride, didecyl methyl oxyethyl ammonium propionate, pyridine and quinoline, non-ionic compounds including primary, secondary and tertiary amines, and anionic compounds including sodium dioctyl sulpho succinate, provided the latter are included in the presence of suitable cations.

3. An electrochemical cell according to claim 2, wherein the current reducing additive is n-alkyl dimethyl benzyl ammonium chloride, the alkyl group having n carbon atoms, n being an integer from 12 to 16.

4. An electrochemical cell according to claim 3, wherein the n-alkyl dimethyl benzyl ammonium chloride is added to the electrolyte in an amount of about 5 mg/l to about 1500 mg/l, by weight, of the n-alkyl dimethyl benzyl ammonium chloride in the electrolyte.

NH_4Cl

5. An electrochemical cell according to claim 4, wherein the n-alkyl dimethyl benzyl ammonium chloride is added to the electrolyte in an amount of about 5 mg/l to about 75 mg/l, by weight, of the n-alkyl dimethyl benzyl ammonium chloride in the electrolyte.

6. A method of reducing water loss in an electrochemical cell includes the step of introducing a current reducing additive into the electrolyte of the cell to reduce the current between the electrodes of the cell when a potential ordinarily sufficient to cause electrolysis of the electrolyte is applied across the electrodes, thereby to reduce gas evolution at the electrodes and, consequently, water loss.

7. A method according to claim 6, wherein the electrochemical cell is a battery, the current reducing additive reducing the current between the electrodes when a potential above which the battery is fully charged is applied across the terminals.

8. A method according to claim 7, wherein the battery is a lead acid battery.

9. A method according to claim 6, wherein the current reducing additive reduces gas evolution at the negative electrode.

10. A method according to claim 9, wherein the current reducing additive forms an impediment or barrier at the negative electrode to ions being attracted to the negative electrode or gas bubbles evolving from the negative electrode.

11. A method according to claim 10, wherein the ions being attracted to the negative electrode are hydrogen ions and the gas bubbles

evolving from the negative electrode are hydrogen bubbles.

12. An electrochemical cell comprising opposed positive and negative electrodes, an aqueous electrolyte in ionic contact with the electrodes and a current reducing additive in ionic contact with the electrolyte and the electrodes, the current reducing additive being arranged to adhere or adsorb to the negative electrode and to form an impediment or barrier over a surface of the negative electrode when a potential ordinarily sufficient to cause electrolysis of the electrolyte is applied across the electrodes, the barrier or impediment providing at least one effect selected from the group comprising a reduction in the flow of current to the electrode, a reduction in the flow of ions to the negative electrode and a reduction in the flow of gas bubbles from the negative electrode.

13. An electrochemical cell according to claim 12, wherein the current reducing additive is arranged to inhibit gas bubbles evolving from the negative electrode to form the impediment or barrier.

14. An electrochemical cell according to claim 13, wherein the current reducing additive includes a head portion for adhering or adsorbing to the negative electrode and a tail portion extending away from the head portion, the tail portion being arranged to trap gas bubbles evolving at the negative electrode.